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**CITY OF EL PASO, TEXAS  
AGENDA ITEM  
DEPARTMENT HEAD'S SUMMARY FORM**



**DEPARTMENT: ENGINEERING & CONSTRUCTION  
MANAGEMENT DEPARTMENT**

**AGENDA DATE: INTRODUCTION: JANUARY 24, 2012  
PUBLIC HEARING: FEBRUARY 07, 2012**

**CONTACT PERSON NAME AND PHONE NUMBER: R. ALAN  
SHUBERT (915) 541-4423**

**DISTRICT(S) AFFECTED: ALL**

**SUBJECT:**

AN ORDINANCE AMENDING TITLE 18 (BUILDING AND CONSTRUCTION), CHAPTER 18.08 (BUILDING CODE), SECTION 18.08.070 (FENCES), OF THE EL PASO CITY CODE, TO AMEND THE REQUIREMENTS AND STANDARDS FOR ELECTRIFIED FENCES, THE PENALTY BEING AS PROVIDED IN SECTION 18.02.107 (VIOLATIONS AND PENALTIES) OF THE EL PASO CITY CODE.

**BACKGROUND / DISCUSSION:**

The Health, Safety and Community Services Legislative Review Committee (LRC) directed staff to research the feasibility of amending current provisions to permit the construction and operation of electric security fences. Staff reviewed existing standards and benchmarked other communities to develop the proposed amendments that outline requirements for the installation and operation of electrified fences. On December 1, 2011, the LRC directed staff to forward the proposed ordinance to the full council for consideration and address additional comments made. The proposed ordinance is responsive to this request.

**PRIOR COUNCIL ACTION:**

N/A

**AMOUNT AND SOURCE OF FUNDING:**

N/A

**BOARD / COMMISSION ACTION:**

N/A

**Mayor**  
John F. Cook

**City Council**

*District 1*  
Ann Morgan Lilly

*District 2*  
Susie Byrd

*District 3*  
Emma Acosta

*District 4*  
Carl L. Robinson

*District 5*  
Dr. Michiel R. Noe

*District 6*  
Eddie Holguin Jr.

*District 7*  
Steve Ortega

*District 8*  
Cortney Carlisle Niland

**City Manager**  
Joyce A. Wilson

ORDINANCE NO. \_\_\_\_\_

AN ORDINANCE AMENDING TITLE 18 (BUILDING AND CONSTRUCTION), CHAPTER 18.08 (BUILDING CODE), SECTION 18.08.070 (FENCES), OF THE EL PASO CITY CODE, TO AMEND THE REQUIREMENTS AND STANDARDS FOR ELECTRIFIED FENCES, THE PENALTY BEING AS PROVIDED IN SECTION 18.02.107 (VIOLATIONS AND PENALTIES) OF THE EL PASO CITY CODE.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF EL PASO:

**Section 1.** That Title 18 (Building and Construction), Chapter 18.08 (Building Code), Section 18.08.070 (Fences), of the El Paso City Code be deleted in its entirety and replaced with the following:

**18.08.070 Section 424 Fences, added.**

International Building Code, 2009 Edition, Section 424 Fences, is hereby added to read as follows:

**424 Fences**

**424.1 Electrified Fences General**

To the extent that the construction of an electrified fence does not conflict with the requirements specified herein, such fence shall be constructed or installed in conformance with the specifications set forth in IEC Standard 60335-2-76.

**424.2 Definition**

**Electrified Fence** – Any fence, barrier or enclosure partially or totally enclosing a building, field or yard, carrying any electrical pulse or charge through any part, section or element thereof.

**424.3 Restricted Use**

1. The installation of an electrified fence is restricted to the following uses and zoning districts:
  - a. for control of domestic farm animals in areas zoned and actually utilized for farming or ranching activities; or for other areas where large domestic animals such as horses or cattle are legally maintained.
  - b. for the permitted uses of outdoor storage, motor vehicle storage, major utility and recycling facilities, general warehouse, contractor yard and manufacturing within the regional commercial district “C-4” except where abutting a residentially zoned property.
  - c. for installation in industrial and manufacturing districts designated as “Q”, “P-1”, “M-1” “M-2” and “M-3” as defined by Title 20 of the El Paso City Code.
2. Only battery-powered units are acceptable. Units must be approved by a Nationally Recognized Testing Laboratory (NRTL) with final installation acceptable to the Building Official.

3. The installation of an electric fence is prohibited,
  - a. within 25 feet of any outdoor area used for the handling of hazardous materials pursuant to the Fire Code,
  - b. within five feet of any public right-of-way,
  - c. where a project is adjacent to a residential zone and use,
  - d. within 300 feet of a park, church and/or school facility.

#### **424.4 Permit Required**

The installation of an electric fence requires an approved permit with the permit official. It shall be unlawful for any person to install, maintain or operate an electrified fence in violation of the provisions of this section.

1. Applications must include the following:
  - a. Site plan indicating the location of the electrified fence and perimeter fence.
  - b. Schematics and load calculations indicating and/or displaying the,
    - i. Location of the power source,
    - ii. Materials used for the fence construction,
    - iii. Location of the regulating and monitoring equipment, and
    - iv. Location of emergency access, knox box and cut-off switch.
2. A permit shall be obtained and renewed every two years with a notarized statement attached to the renewal application from an authorized representative of the fence or barrier equipment manufacturer indicating the installation is operating in conformance with the original design and complies with acceptable safety standards.

#### **424.5 Registration Required**

Prior to the installation or use of an electrified fence and upon permit issuance, the permit holder must register the electrified fence with the fire code official to identify the location of said fence and required cut-off switch and knox box in the event that deactivation is required by an authorized public safety official.

#### **424.6 Standards**

##### **424.6.1 Standards - Electrification**

Electric fences or barriers must be designed and certified by an authorized representative of a fence or barrier equipment manufacturer. Upon installation, said representative shall certify the installation meets the following design and safety requirements:

1. AC current shall not be used to energize any electric fence.
2. The energizer for electric fences shall be driven by a commercial storage battery not to exceed 12 volts capacity charged by a solar panel. A commercial trickle charger may augment power source.
3. The electric charge produced by the fence upon contact shall meet the energy output requirements of section 22.108 of the IEC.
4. All ground system cables shall be properly insulated.
5. The controller ground system shall not be connected to any plumbing systems in or out of use and shall be at least 50 feet from other utility and buried water pipes.

6. The fence controller ground wire shall not touch any buildings on site.
7. Fence controller and its ground system shall be at least 50 ft. away from radio and buried telephone wires.
8. An electric fence shall be installed at a minimum clearance from power or telephones lines in accordance with Table BB.1 of the IEC.
9. A lightning diverter (commonly referred to as a lightning arrestor) shall be installed between the fence and the fence controller.
10. A cut-off switch shall be installed capable of disconnecting the fence from the controller in case of emergencies, electrical storms, etc.
11. A knox box shall be installed to provide secure access to the appropriate public safety official to the cut-off switch. The knox box shall be illuminated to a minimum one foot candle.
12. Each energizer shall be connected to its own ground system and must not be connected to any other ground system(s).
13. Two or more energizers shall not be connected to the same fence unless the use of multiple energizers does not increase the overall charge transmitted on the fence and adequate access is provided to the cut-off switch to each energizer.
14. All cabling/wire and connectors shall be of the same material (steel, copper, etc.).
15. All wires shall be separated at minimum clearance in accordance with section 29.101 of the IEC.

#### **424.6.2 Standards-Height**

Electrified fences shall be a minimum of six (6) feet in height and shall not exceed a maximum of ten (10) feet in height.

#### **424.6.3 Standards- Warning Signs**

All electric fences shall have warning signs of reflective material and shall be in accordance with the following requirements:

1. Shall be a minimum of 4 inches by 8 inches in accordance with annex BB of the IEC.
2. All lettering shall be a minimum of one (1) inch high.
3. Shall consist of a yellow background with black inscriptions and kept in good condition to ensure continued visibility.
4. Shall be placed at a maximum of 30 feet distance along the fence with a minimum of two signs for less than a 50 foot length.
5. Signs shall bear the words "Live Wires" or "Electric Fence" in indelible letters in English and Spanish.

#### **424.7 Required Barrier(s)**

1. No electric fence shall be installed or used unless it is completely surrounded by a non-electrical fence or perimeter fence that is not less than six (6) feet in height and no more than eight feet in height in accordance with the provisions of section 20.16.040 of the El Paso Code.
2. The distance between the electrified fence and required perimeter fence shall be a minimum of four inches at its closest point and no further than five feet.

3. A separate permit shall be obtained for the construction of the perimeter fence that shall be constructed prior to the electrified fence installation pursuant to Title 20 of the El Paso City Code.
4. The area between the perimeter wall or fence and the electrified fence shall be kept clear of shrubbery, weeds, trash and debris.

#### **424.8 Hours of activation**

An electrified fence shall only be energized during the hours when the general public does not have legal access to the protected property.

#### **424.9 Fees**

The established fee for a permit to install an electrified fence shall be paid by the applicant at the time of filing an application and upon the renewal of the permit.

#### **424.10. Barbed Wire, Farm/Ranch**

1. Barbed wire fences installed in conventional multi-strand configuration may be used for the same purpose, the same area, and under the same conditions outlined in Section 424.11.
2. Wire shall be securely fastened to durable wooden or metal posts, spaced not to exceed fifteen (15) feet center-to-center, and designed to withstand all loads reasonably expected to be imposed upon them.
3. Gates in such fences shall have solid frames, be conventionally hinged, and shall not swing over public property.

#### **424.11 Barbed Wire Other Than Farm/Ranch**

1. Barbed wire may be used as a topping on walls and fences in areas zoned for commercial and manufacturing uses provided such wire is properly attached and secured to risers or outriggers especially designed for this purpose. Such barbed wire installation shall be placed not less than seven (7) feet above finished grade at any point along the fence, and shall not at any point extend beyond the property line, over the public way, or adjoining property.
2. The use of barbed wire for dwellings or apartments in residential and apartment zones is prohibited.
3. The use, design and minimum height of barbed wire fence topping for occupancies other than dwellings or apartments located in residential or apartment zones, shall be determined by the building official for each such installation. Such determination shall be based on the need for barbed wire protection, considering the probable risk or theft or trespass, the character of the neighborhood, and other pertinent factors; the possible hazards to persons; and reasonable consideration of appearance.

#### **424.12 Use of Broken Glass.**

The use of broken glass and similar materials designed to do bodily harm, as a topping for fences and walls is prohibited.

**Section 2.** Except as herein provided, Title 18 (Building and Construction) shall remain in full force and effect.

**PASSED AND APPROVED** this \_\_\_\_\_ day of \_\_\_\_\_, 2012.

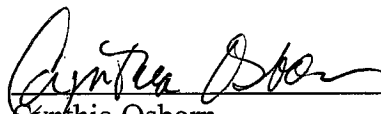
**THE CITY OF EL PASO**

\_\_\_\_\_  
John F. Cook  
Mayor

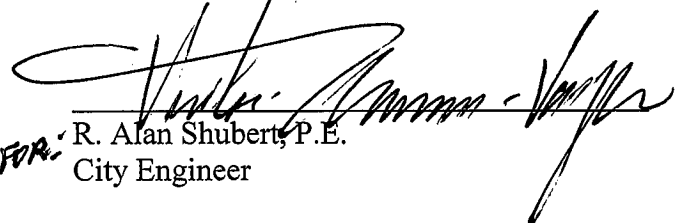
ATTEST:

\_\_\_\_\_  
Richarda Duffy Momsen  
City Clerk

APPROVED AS TO FORM:

  
\_\_\_\_\_  
Cynthia Osborn  
Assistant City Attorney

APPROVED AS TO CONTENT:

  
\_\_\_\_\_  
FOR: R. Alan Shubert, P.E.  
City Engineer

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